

PULMONARY EXAMINATION

1. **General Examination** - Before doing the examination of the respiratory system a general examination relevant to the respiratory system should be carried out.

1. Appearance.
2. Pallor. (Yellowish discolouration of skin)
3. Cyanosis. Blueish & greyish colour of skin, nails
4. Clubbing (excessive curvature of the nail)
5. Venous pulses. (jugular v. pulse at right side of the neck)
6. Lymph node enlargement.
(Immune system gland)

* Examination of the respiratory system is carried out by

- 1) **Inspection** - (see & observation)
- 2) **Palpation** - (touch)
- 3) **Percussion** - (tap over left of 5th & right hand on 5th & 6th rib)
- 4) **Auscultation** - using stethoscope.

* Examination of the chest -

1) **Inspection** -

Shape of the chest - The normal chest is bilaterally symmetrical & elliptical in cross section.

The transverse diameter > anteroposterior diameter

1) Common abnormalities of shape -

Kyphosis - forward bending of vertebral column.

2) Scoliosis - lateral bending of vertebral column.

3 barrel shaped chest - use in anteroposterior diameter.

4. flattening.

• Rate & Rhythm of respiration - Rate of respiration in health (adult) 12-14 breaths/min.

• Measurement of chest expansion - chest expansion can be measured with a tape measure around the chest just below the nipples in a healthy adult it is about 3-5 cm.

• Symmetry of chest expansion - chest expansion of a healthy adult should be equal on both sides.

• Movement of the chest wall - presence of intercostal recessions or the use of accessory muscles.

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2. **Palpation** :- Before making a systemic examination palpate any part of the chest where the pt complains of pain or where there is a swelling.

→ Position of the apex beat & Trachea.

In normal subject the trachea is in the midline & can be palpated in the suprasternal notch.

The **apex beat** (the lowest & outmost point of definite cardiac pulsations) can be usually palpated in the 5th intercostal space within the midclavicular line.

→ Displacement of the apex beat & trachea indicates that the position of the mediastinum has been altered.

This may be due to disease of the heart, lungs or pleura.

• Expansion of the chest - Symmetrical or asymmetrical chest expansion can be assessed by palpation.

• **Vocal fremitus** - Vocal fremitus is the vibration detected by palpation with the palm of the hand on the chest, when the pt is asked to 'repeat "gg"' or 'anunavaya'.

→ In a normal healthy adult, the vibrations felt in the corresponding areas on the two sides of the chest are equal in intensity.

3. **Percussion** :- The middle finger of the left hand is placed on the chest & middle phalanx is struck with the tip of the middle finger of the right hand.

→ Compare the percussion note (resonant) with that of the corresponding area of the opp. site of the chest.

→ A resonant sound is produced during percussion. The sound & feel of resonance over a healthy lung has to be learned by practice.

4) **Auscultation -**
Breath sounds - There are 2 types of breath sounds (1) Vesicular breath sound (VBS)

(2) bronchial breath sound.

i) **Vesicular breath sound [VBS] -** These originate in the larger airways & are produced by the passage of air in & out of normal lung tissue.

In good health, they can be heard all over the chest.

The inspiration is longer than expiration.

The inspiration sound is intense & louder than the expiratory sound.

It is a low pitched resulting sound.

There is no gap b/w inspiration & expiration.

~~ins exp.~~

Bronchial breath sound:- These are loud, harsh breathing sounds with a midrange pitch.

The expiration is longer than Inspiration